Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for use in rate controlling an activity, the method comprising:

identifying an approximated inverse rate ~~of a desired rate~~, a fix-up adjustment value, and a quantum;

maintaining an activity measurement value based on a measure of activity;

maintaining a rate control value based on the ~~measure of~~ activity <u>measurement value</u> and the approximated inverse rate;

applying the fix-up adjustment value once each said quantum to the rate control value to maintain rate accuracy of the activity<u>;</u>

<u>wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in maintaining the rate control value.</u>

Claim 2 (original): The method of claim 1, wherein the activity includes sending packets of a stream of packets.

Claim 3 (currently amended): The method of claim 2, wherein the ~~measure of~~ activity <u>measurement value</u> is a number of bytes or packets sent.

Claim 4 (original): The method of claim 2, wherein the rate control value is a scheduling value used for determining the relative ordering or timing of a next one or more packets of the stream of packets.

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Claim 5 (original): The method of claim 1, wherein said applying the fix-up adjustment value once each quantum to the rate control value includes dithering the rate control value to either round-up or not to round-up the rate control value based on a random number.

Claim 6 (currently amended): A ~~tangible~~ computer-readable medium containing computer-executable instructions for performing steps for rate controlling an activity, said steps comprising

identifying an approximated inverse rate, a fix-up adjustment value, and a quantum;

maintaining an activity measurement value based on a measure of activity;

maintaining a rate control value based on the ~~measure of~~ activity measurement value and the approximated inverse rate;

applying the fix-up adjustment value once each said quantum to the rate control value to maintain rate accuracy of the activity;

wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in maintaining the rate control value.

Claim 7 (original): The computer-readable medium of claim 6, wherein the activity includes sending packets of a stream of packets.

Claim 8 (currently amended): The computer-readable medium of claim 7, wherein the ~~measure of~~ activity measurement value is a number of bytes or packets sent.

Claim 9 (original): The computer-readable medium of claim 7, wherein the rate control value is a scheduling value used for determining the relative ordering or timing of a next one or more packets of the stream of packets.

Claim 10 (original): The computer-readable medium of claim 6, wherein said applying the fix-up adjustment value once each quantum to the rate control value includes dithering the rate control value to either round-up or not to round-up the rate control value based on a random number.

Claim 11 (currently amended): An apparatus for use in rate controlling an activity, the apparatus comprising:

means for identifying an approximated inverse rate, a fix-up adjustment value, and a quantum;

means for maintaining an activity measurement value based on a measure of activity;

means for maintaining a rate control value based on the ~~measure of~~ activity measurement value and the approximated inverse rate;

means for applying the fix-up adjustment value once each said quantum to the rate control value to maintain rate accuracy of the activity;

wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in maintaining the rate control value.

Claim 12 (original): The apparatus of claim 11, wherein the activity includes sending packets of a stream of packets.

Claim 13 (currently amended): The apparatus of claim 12, wherein the ~~measure of~~ activity measurement value is a number of bytes or packets sent.

Claim 14 (original): The apparatus of claim 12, wherein the rate control value is a scheduling value used for determining the relative ordering or timing of a next one or more packets of the stream of packets.

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Claim 15 (original): The apparatus of claim 11, wherein said means for applying the fix-up adjustment value once each quantum to the rate control value includes: means for dithering the rate control value to either round-up or not to round-up the rate control value based on a random number.

Claim 16 (currently amended): A method for use in scheduling packets, the method comprising:

identifying in a current slot a scheduling item corresponding to a packet;

identifying an approximated inverse rate of a desired rate, a fix-up adjustment value, and a quantum value corresponding to the scheduling item;

identifying a last adjusted slot for the scheduling item;

adjusting a bytes sent value based on a number of bytes of the packet to identify a new bytes sent value; and

in response to identifying that the bytes sent value is greater than or equal to a quantum value corresponding to the scheduling item: (a) identifying a new last adjusted slot for the scheduling item, said identifying the new last adjusted slot including summing a product of the approximated inverse rate and the quantum value, the fix-up adjustment value, and the last adjusted slot; and (b) determining a next slot for the scheduling item, said determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the new last adjusted slot;

wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in said scheduling of packets.

Claim 17 (original): The method of claim 16, wherein said identifying the last adjusted slot for the scheduling item includes subtracting the product of the approximated inverse rate and the bytes sent value from the current slot.

Claim 18 (original): The method of claim 16, wherein the fix-up adjustment value is determined based on the error induced by the approximated inverse rate during a quantum corresponding to the scheduling item.

Claim 19 (original): The method of claim 16, comprising: in response to identifying that the bytes sent value is less than a quantum value corresponding to the scheduling item, determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the last adjusted slot.

Claim 20 (original): The method of claim 16, wherein said identifying the new last adjusted slot for the scheduling item includes dithering the new last adjusted slot to either round-up or not to round-up the new last adjusted slot based on a random number.

Claim 21 (currently amended): An apparatus for use in scheduling packets, the apparatus comprising:

means for identifying in a current slot a scheduling item corresponding to a packet;

means for identifying an approximated inverse rate <u>of a desired rate</u>, a fix-up adjustment value, and a quantum value corresponding to the scheduling item;

means for identifying a last adjusted slot for the scheduling item;

means for adjusting a bytes sent value based on a number of bytes of the packet to identify a new bytes sent value; and

means for in response to identifying that the bytes sent value is greater than or equal to a quantum value corresponding to the scheduling item: (a) identifying a new last adjusted slot for the scheduling item, said identifying the new last adjusted slot including summing a product of the approximated inverse rate and the quantum value, the fix-up adjustment value, and the last adjusted slot; and (b) determining a next slot for the scheduling item, said determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the new last adjusted slot;

<u>wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in said scheduling of packets</u>.

Claim 22 (original): The apparatus of claim 21, wherein said means for identifying the last adjusted slot for the scheduling item includes means for subtracting the product of the approximated inverse rate and the bytes sent value from the current slot.

Claim 23 (original): The apparatus of claim 21, wherein the fix-up adjustment value is determined based on the error induced by the approximated inverse rate during a quantum corresponding to the scheduling item.

Claim 24 (original): The apparatus of claim 21, comprising: means for in response to identifying that the bytes sent value is less than a quantum value corresponding to the scheduling item, determining the next slot, which includes adding the product of the approximated inverse rate and the new bytes sent value to the last adjusted slot.

Claim 25 (original): The apparatus of claim 21, comprising: means for computing the approximated inverse rate and the fix-up adjustment value.

Claim 26 (original): The apparatus of claim 21, wherein said identifying the new last adjusted slot for the scheduling item includes dithering the new last adjusted slot to either round-up or not to round-up the new last adjusted slot based on a random number.

Claim 27 (currently amended): A <u>tangible</u> computer-readable medium containing computer-executable instructions for performing steps for use in scheduling packets, said steps comprising:

identifying in a current slot a scheduling item corresponding to a packet;

identifying an approximated inverse rate <u>of a desired rate</u>, a fix-up adjustment value, and a quantum value corresponding to the scheduling item;

identifying a last adjusted slot for the scheduling item;

adjusting a bytes sent value based on a number of bytes of the packet to identify a new bytes sent value; and

in response to identifying that the bytes sent value is greater than or equal to a quantum value corresponding to the scheduling item: (a) identifying a new last adjusted slot for the scheduling item, said identifying the new last adjusted slot including summing a product of the approximated inverse rate and the quantum value, the fix-up adjustment value, and the last adjusted slot; and (b) determining a next slot for the scheduling item, said determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the new last adjusted slot<u>;</u>

<u>wherein the fix-up adjustment value is a predetermined value for correcting a deviation from the desired rate based on a lack of precision error induced by said use of the approximated inverse rate in said scheduling of packets</u>.

Claim 28 (original): The computer-readable medium of claim 27, wherein said identifying the last adjusted slot for the scheduling item includes subtracting the product of the approximated inverse rate and the bytes sent value from the current slot.

Claim 29 (original): The computer-readable medium of claim 27, wherein the fix-up adjustment value is determined based on the error induced by the approximated inverse rate during a quantum corresponding to the scheduling item.

Claim 30 (original): The computer-readable medium of claim 27, comprising: in response to identifying that the bytes sent value is less than a quantum value corresponding to the scheduling item, determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the last adjusted slot.

Claim 31 (original): The computer-readable medium of claim 27, wherein said identifying the new last adjusted slot for the scheduling item includes dithering the new last adjusted slot to either round-up or not to round-up the new last adjusted slot based on a random number.